

REMARKS

Claims 1 and 3-7 stand rejected. Claims 3 and 4 were indicated as allowable if rewritten to overcome the outstanding rejections under 35 U.S.C. § 112 and to include all of the limitations of the base claim and any intervening claims. Claims 2, 8, and 9 were previously cancelled. By this paper, Claims 3 and 4 are amended to be independent. The amendments add no new matter. Thus, Claims 1 and 3-7 are presented for consideration and further examination in view of the following remarks.

Rejection of Claims 3 and 4 under 35 U.S.C. § 112, second paragraph

The Examiner rejected Claims 3 and 4 under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner states that the phrase “more elastic” in Claims 3 and 4 renders those claims indefinite.

Applicant respectfully disagrees, and submits that the meaning of the phrase “more elastic,” as recited in Claims 3 and 4, would be clear to one of ordinary skill in the art. Thus, these claims are not indefinite under 35 U.S.C. § 112. *See* MPEP 2171. For example, the Encyclopedia Britannica’s online entry for “elasticity” (attached hereto as Exhibit A) describes elasticity as “the ability of a deformed material body to return to its original shape and size when the forces causing the deformation are removed.” The entry goes on to state:

The generalized Hooke’s law, upon which the linear theory of elasticity is based, provides a good description of the elastic properties of all materials, provided that the deformations correspond to extensions not exceeding about 5 percent. This theory is commonly applied in the analysis of engineering structures and of seismic disturbances.

See Exhibit A. Hooke’s Law is described in the online Encyclopedia Britannica as follows:

Mathematically, Hooke’s law states that the applied force F equals a constant k times the displacement or change in length x , or $F = kx$. The value of k depends not only on the kind of elastic material under consideration but also on its dimensions and shape.

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See Encyclopedia Britannica's online entry for Hooke's Law, attached hereto as Exhibit B. Thus, Applicant respectfully submits that the phrase "more elastic," as used in Claims 3 and 4, clearly and definitely describes to one of skill in the art the degree to which the bracing bolt and sleeve, or the sleeve and the first element to be braced, elastically deform under the same load, for example based on their particular composition and configuration. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 112, second paragraph, be withdrawn.

Rejection of Claims 1 and 5-7 under Wedellsborg

Claims 1 and 5-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,690,456 (Wedellsborg). With respect to the anticipation rejection of independent Claims 1 and 7, Applicant respectfully submits that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. See M.P.E.P. § 2131.

Independent Claim 1

Independent Claim 1 is directed to a bracing arrangement with overload protection and recites "a first element to be braced; a second element to be braced against the first element; a bracing bolt bracing the first and second elements, wherein said bracing bolt is strained to its yielding point; a sleeve, which is braced and compressed against the second element to be braced with the bracing bolt and which goes through the first element to be braced; and a sleeve tensioning device engaging the sleeve and bracing the first element against the second element, the sleeve tensioning device releasing the sleeve to a pre-specified extent, wherein increasing the operating force acting on the first and second elements beyond an operating force threshold relaxes the sleeve relative to the bracing by the bracing bolt and breaks the bracing bolt."

The Examiner cites to Figure 1 of Wedellsborg as disclosing the "'first element to be braced' – 12, a 'second element to be braced' – 14, a bracing bolt' – 16, 'is strained to its yielding point'. . . , a 'sleeve' – 28, a 'sleeve tensioning device' – including 40" recited in Claim 1. Claim 1, however, also recites "a sleeve, which is braced and compressed against the second element to be braced with the bracing bolt." Applicant respectfully submits that Wedellsborg does not expressly or inherently describe this element. The stud sleeve 28 has two threaded

sleeve ends 30, 32. The upper threaded end 30 of the stud sleeve 28 engages a base nut 40. The lower threaded end 32 of the stud sleeve 28 is "threadably engaged with member 14 within the existing reactor flange bore 20." After the threadable engagement with member 14, "tension (preload) is generated in . . . the stud sleeve" with the base nut 40. The sleeve is never compressed against the second element to be braced at all, and certainly is not compressed against the second element to be braced "with the bracing bolt." In Wedellsborg, the bracing bolt extends through the sleeve, it does not compress it in any way. Because the stud sleeve 28 is in tension, and because that tension is created between the base bolt 40 and the reactor flange bore within member 14, the stud sleeve cannot be compressed against member 14.

Further, Claim 1 also recites a "sleeve tensioning device . . . wherein increasing the operating force acting on the first and second elements beyond an operating force threshold relaxes the sleeve relative to the bracing." When the base nut 40 is tightened, "tension (preload) is generated in . . . the stud sleeve." Further, as stud sleeve 28 is threadably engaged with member 14 within the existing reactor flange bore 20 and also engaged with flange 12 via the base nut 40, any operating force acting on flange 12 and member 14 does not relax the sleeve 28 but can only increase tension within sleeve 28.

It is therefore respectfully submitted that Claim 1 is patentable over the prior art of record.

Independent Claim 7

Independent Claim 7 is directed to a method for bracing at least two elements to be braced with the help of a bracing bolt, a sleeve and a sleeve tensioning device, and recites "bracing the sleeve by means of the bracing bolt against the second element to be braced, whereby the bracing bolt compresses the sleeve and the bracing bolt is strained to its yielding point, bracing the first element to be braced on the second element to be braced with the sleeve tensioning device, whereby the sleeve tensioning device is braced with engagement with the sleeve projecting through the first element to be braced, in such a manner that the sleeve is relaxed relative to the preceding compression up to a pre-specified extent of release, wherein an

operating force acting on the first and the second elements leads, above a pre-specified threshold value, to a complete release of the sleeve and to the breaking of the bracing bolt.”

The Examiner cites Wedellsborg as disclosing the “same arrangement as the presently-disclosed invention” and being “inherently capable of such function” as examiner asserts is required by the “wherein” clause. Claim 7, however, also recites “bracing the sleeve by means of the bracing bolt against the second element to be braced, whereby the bracing bolt compresses the sleeve.” As discussed above with respect to Claim 1, the applicant respectfully submits that Wedellsborg does not disclose a bracing bolt compressing the sleeve. As discussed above, Wedellsborg discloses a stud sleeve 28 having two threaded ends 30, 32. The first threaded end 30 is threadably engaged with base bolt 40 which is situated above flange 12. The second threaded end 32 is threadably engaged with the reactor flange bore 20. Additionally, stud 16 passes through stud sleeve 28 and has two threaded ends 22, 24. The first threaded end 22 threadably engages with a top outer nut 50. The second threaded end 24 of stud 16 threadably engages member 14 within the reactor flange bore 20. Nuts 40, 50 are tightened “whereby tension (preload) is generated in the inner stud and the stud sleeve.” In contrast to Claim 7, tension is generated stud sleeve 28 by the tightening of base bolt 40, which tension is generated independent of the condition of stud 16 and top bolt 50.

Claim 7 further states “wherein an operating force acting . . . above a pre-specified threshold value, [leads] to a complete release of the sleeve and to the breaking of the bracing bolt.” As stated above, the stud sleeve 28 is threadably engaged with member 14 and the base nut 40 located above flange 12. Any force applied to the flange 12 or member 14 that could lead to the breaking of stud 16 cannot lead to a complete release of stud sleeve 28 due to the threaded engagement. Wedellsborg is not capable of operating according to the language of Claim 7.

Because Wedellsborg fails to set forth each and every element disclosed in Claim 7 of the present application, it is respectfully submitted that this claim is patentable over the art of record. Therefore, allowance of Claim 7 is respectfully requested.

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Dependent Claims 5 and 6

Dependent Claims 5 and 6 depend directly or indirectly from Claim 1 and, thus, are patentable for at least the same reasons that Claim 1 is patentable over the applied art. Therefore, allowance of Claims 5 and 6 is respectfully requested.

Allowable Subject Matter

Claims 3 and 4 have been indicated as allowable if rewritten to overcome the outstanding rejections under 35 U.S.C. § 112 and to include all of the limitations of the base claim and any intervening claims. Claims 3 and 4 have now been amended to include all of the limitations of the base claim and any intervening claims. As noted above, Applicant submits that the outstanding rejections of Claims 3 and 4 under 35 U.S.C. § 112 are inapposite and should be withdrawn. Accordingly, Applicant respectfully requests allowance of Claims 3 and 4.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

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CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

Any remarks in support of patentability of one claim should not be imputed to any other claim in this or a related application, even if similar terminology is used. Any remarks referring to only a portion of a claim should not be understood to base patentability on solely that portion; rather, patentability must rest on each claim taken as a whole.

Applicant respectfully traverses each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art discloses or teaches, even if not expressly discussed herein. Although changes to the claims have been made, no acquiescence or estoppel is or should be implied thereby; such amendments are made only to expedite prosecution of the present application and are without prejudice to the presentation or assertion, in the future, of claims relating to the same or similar subject matter.

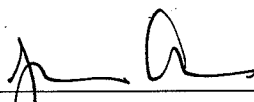
The undersigned has made a good faith effort to respond to all of the noted rejections and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if an issue requires clarification, the Examiner is respectfully requested to call Applicant's attorney in order to resolve any such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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